REMARKS

Claims 1-7 have been examined and are all the claims pending in the application.

Claim rejections -- 35 U.S.C. § 102

Claims 1-2 and 4 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Wang, which is previously of record. Applicant respectfully traverses this rejection.

For example, claim 1 recites the feature of calculating a remaining bit amount for each picture. The Examiner maintains that this feature is disclosed by Wang at col. 7, lines 45-65. See May 12 Office Action, page 3. However, Applicant respectfully disagrees with the Examiner's position.

Applicant notes that at col. 7, lines 10-13 of Wang, Wang discloses that the total number of bits assigned to all of the pictures within a group of pictures (GOP) should be equal to $R_{GOP,N}$. Wang then assumes that all of the pictures of the same type have the same complexity, and thus only three complexities are required, one for each of the I, B, and P pictures. (col. 7, lines 25-31). Wang then calculates a target rate T_n for a frame n using variables N_I, N_P, and N_B which are the numbers of I, P, and B pictures in the GOP. (see col. 7, lines 31-38). However, Wang notes that this bit allocation strategy may be modified by considering the distribution of the remaining number of bits over the remaining pictures in the GOP. (col. 7, lines 39-42). R, the remaining number of bits, is thus calculated *over a number of different frames* from n' = 0 to n' = n-1, i.e., the *number of frames remaining in the current GOP*. Thus, Applicant respectfully submits that taken in context, Wang, at col. 7, lines 45-65, discloses calculating *a remaining number of bits*

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over the GOP. By contrast, claim 1 sets forth calculating a remaining number of bits *for each picture*. Therefore, claim 1 is patentable over Wang for this reason.

Moreover, claim 1 also recites the feature of calculating a quantization parameter of a current frame based on the complexity for each picture and the remaining bit amount for each picture. The Examiner maintains that this feature is met by Wang at col. 28, lines 40-47. See May 12 Office Action, page 3. However, Applicant respectfully disagrees with the Examiner's position.

At the cited portion of Wang, Wang discloses that transcoders 620, 630 encode partially decompressed data at a different rate, typically using a different quantization parameter according to a target bit rate signal. As discussed above, the target rate Tn disclosed at col. 7, lines 31-38 of Wang is based on $R_{GOP,N}$, which is the total number of bits assigned to all of the pictures within a GOP of N pictures. (see col. 7, lines 10-13). Thus, Wang does not disclose calculating the quantization parameter based on the remaining bit amount *for each picture*, as set forth by claim 1. Claim 1 is thus patentable over Wang for this additional reason.

Finally, claim 1 recites the feature of comparing the quantization parameter of the current frame with a predetermined minimum quantization parameter. The Examiner maintains that this feature is met by Wang at col. 7, lines 48-52. The Examiner further argues at page 2 of the Final Office Action that at col. 29, lines 10-15, Wang discloses this feature. However, Applicant respectfully disagrees with the Examiner's position. At col. 7, lines 48-52, Wang simply contains no disclosure of a minimum quantization parameter or comparing the quantization parameter of the current frame with such a minimum quantization parameter. At col. 29, lines

10-15, Wang discloses that target rates will converge within one or two GOPs, and that the differences in target rates are within a fairly small margin. At best, this disclosure relates to a feedback mechanism whereby target rates are iteratively converged to a value. Applicant respectfully submits that an iterative feedback process is not commensurate with comparing the quantization parameter with a predetermined minimum quantization parameter, as set forth by claim 1.

Accordingly, Applicant respectfully submits that claim 1 is patentable over Wang for these reasons. Claims 2 and 4 are patentable based on their respective dependencies.

Claim rejections -- 35 U.S.C. § 103

Claims 5-7 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Wang in view of Liu, both of which are previously of record.

Claims 5-7 depend from claim 1, which has been shown above to be patentable over Wang. Liu does not cure the deficiencies of Wang, and therefore Applicant respectfully submitst that claims 5-7 are patentable over the teachings of Wang and Liu, either alone or in combination.
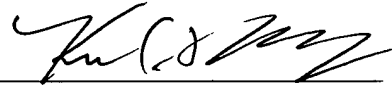
Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

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